

What is claimed is

1. A method of estimating an uplink SINR of a CDMA channel, including the steps of
  - 5 determining a first estimate of the signal power using the channelization code of said channel;  
searching for and selecting an idle channelization code that is orthogonal to the channelization code of said channel;  
determining a second estimate of the power of interference plus noise  
10 using said idle channelization code; and  
forming said SINR estimate using said first and second estimates.
2. The method of claim 1, wherein said forming step includes rescaling said second estimate if the channelization code of said channel and said idle channelization code have different spreading factors.
3. The method of claim 1, including selecting an idle channelization code having lowest possible spreading factor.
- 20 4. The method of claim 3, including selecting the idle channelization code  $C_{ch,2,1}$  when 1 or 2 Dedicated Physical Data Channels are used on the uplink.
5. The method of claim 3, including selecting the idle channelization code  $C_{ch,4,2}$  when 3 or 4 Dedicated Physical Data Channels are used on the uplink.
- 25 6. The method of claim 3, including selecting the idle channelization code  $C_{ch,8,1}$  when 5 or 6 Dedicated Physical Data Channels are used on the uplink.
7. A method of estimating the power of uplink interference plus noise on a CDMA channel, including the steps of
  - 30 searching for and selecting an idle channelization code that is orthogonal to the channelization code of said channel;

determining an estimate of the power of interference plus noise using said idle channelization code.

8. The method of claim 7, including selecting an idle channelization code having  
5 lowest possible spreading factor.

9. An arrangement for estimating an uplink SINR of a CDMA channel, including  
means (16, 40) for determining a first estimate of the signal power using  
the channelization code of said channel;  
10 means (28) searching for and selecting an idle channelization code that is  
orthogonal to the channelization code of said channel;  
means (30) for determining a second estimate of the power of interference  
plus noise using said idle channelization code; and  
means (32, 42) for forming said SINR estimate using said first and second  
15 estimates.

10. The arrangement of claim 9, including means (32, 42) for rescaling said  
second estimate if the channelization code of said channel and said idle chan-  
nelization code have different spreading factors.

20 11. The arrangement of claim 9, including means (28) for selecting an idle  
channelization code having lowest possible spreading factor.

12. The arrangement of claim 11, including means (28) for selecting the idle  
25 channelization code  $C_{ch,2,1}$  when 1 or 2 Dedicated Physical Data Channels are  
used on the uplink.

13. The arrangement of claim 11, including means (28) for selecting the idle  
channelization code  $C_{ch,4,2}$  when 3 or 4 Dedicated Physical Data Channels are  
30 used on the uplink.

14. The arrangement of claim 11, including means (28) for selecting the idle channelization code  $C_{ch,8,1}$  when 5 or 6 Dedicated Physical Data Channels are used on the uplink.

5 15. An arrangement for estimating the power of uplink interference plus noise on a CDMA channel, including

means (28) searching for and selecting an idle channelization code that is orthogonal to the channelization code of said channel;

10 means (30) for determining an estimate of the power of interference plus noise using said idle channelization code.

16. The arrangement of claim 15, including means (28) for selecting an idle channelization code having lowest possible spreading factor.

15 17. A base station having an arrangement for estimating an uplink SINR of a CDMA channel, including

means (16, 40) for determining a first estimate of the signal power using the channelization code of said channel;

20 means (28) searching for and selecting an idle channelization code that is orthogonal to the channelization code of said channel;

means (30) for determining a second estimate of the power of interference plus noise using said idle channelization code; and

means (32, 42) for forming said SINR estimate using said first and second estimates.

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18. The base station of claim 17, including means (32, 42) for rescaling said second estimate if the channelization code of said channel and said idle channelization code have different spreading factors.

30 19. The base station of claim 17, including means (28) for selecting an idle channelization code having lowest possible spreading factor.

20. The base station of claim 19, including means (28) for selecting the idle channelization code  $C_{ch,2,1}$  when 1 or 2 Dedicated Physical Data Channels are used on the uplink.

5 21. The base station of claim 19, including means (28) for selecting the idle channelization code  $C_{ch,4,2}$  when 3 or 4 Dedicated Physical Data Channels are used on the uplink.

10 22. The base station of claim 19, including means (28) for selecting the idle channelization code  $C_{ch,8,1}$  when 5 or 6 Dedicated Physical Data Channels are used on the uplink.

23. A base station having an arrangement for estimating the power of uplink interference plus noise on a CDMA channel, including  
15 means (28) searching for and selecting an idle channelization code that is orthogonal to the channelization code of said channel;  
means (30) for determining an estimate of the power of interference plus noise using said idle channelization code.

20 24. The base station of claim 23, including means (28) for selecting an idle channelization code having lowest possible spreading factor.